

*IRBISIA KNIGHTI*, A NEW MIRINE PLANT BUG  
(HETEROPTERA: MIRIDAE) FROM THE PACIFIC NORTHWEST

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*Abstract.*—The new species *Irbisia knighti* is described and its distribution given.

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***Irbisia knighti***, new species  
(Figs. 1-8)

*Diagnosis.* Similar to *I. solani* (Heidemann) 1910 in size and surface features but is consistently recognizable by brachyptery of both sexes and white vestiture. *I. knighti* is separated from the brachypterous form of *I. sericans* (Stål) 1858 by the slightly punctate pronotum and white vestiture of the former species (Figs. 1 and 2).

*Description.* Holotype male. Brachypterous. Length 3.90-4.63 (all measurements in millimeters), width 2.18-2.30, shining black, moderately covered with shining white setae. HEAD: width across eyes 1.25-1.30, vertex 0.59-0.63, dorsal width of eye 0.35-0.36; triangular, smooth; temporal areas distinct, bordered basally by transverse short sulcus, glabrous median depression indistinct; basal carina moderately prominent, slightly rounded, declivous to level of vertex, straight, eyes broadly joined to frons, posterolateral margins arcuate posteriorly in dorsal view; distance from tylus to ventral margin of eye 0.61-0.63, height of the eye 0.50-0.53, maximum interocular width (anterior view of frons) 0.90-0.95. ROSTRUM: length 1.70-1.83, black, surpassing mesocoxae to just attaining apices of metacoxae. ANTENNAE: black; I, length 0.50-0.55, apices fuscous; II, 1.45-1.55; III, 0.78-0.93; IV, 1.02-1.20. PRONOTUM: length 0.86-0.88, anterior width 0.93-0.95, posterior width 1.45-1.55; subconical, slightly flattened, distinctly or confluent punctate, lateral margins straight, broadly rounded at junction with propleura, anterior angles rounded, indistinct in dorsal view, gently sulcate in lateral view; calli slightly convex, smooth, narrowly confluent anteriorly, with transverse depression on inner, and foveate depression of outer anterior angles reaching antero-lateral margins of pronotum. LEGS: black; coxae and femora with apices testaceous; tibiae testaceous with bases of knees black; tarsi black. HEMELYTRA: membrane reduced, extending

slightly beyond apex of cuneus, cells not developed; apex of abdomen exposed in dorsal view. VESTITURE: dorsum clothed with suberect white setae; head and pronotum sparsely covered with thin setae; hemelytra moderately covered with sericeous setae basally, these setae grading into and being replaced by thin setae apically; venter moderately clothed with white setae; eyes with sparse minute pubescence between facets. GENITALIA: Left paramere (Fig. 3): evenly curved; sensory lobe developed but not set off by a dorsal suture, with numerous bristles; shaft truncate at apex, with numerous setae. Right paramere (Fig. 4): subcylindrical; with a single short apical process and a few short lateral setae. Vesica (Fig. 5): two smooth membranous lobes, each with a small preapical side lobe; sclerotized process furcate, primary process strongly serrate; ductus seminis expanded subapically.

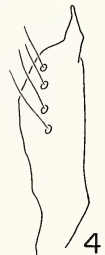
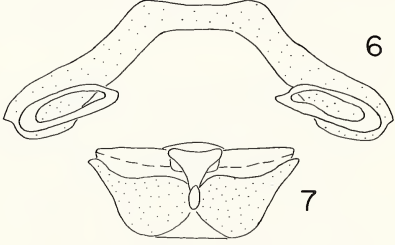
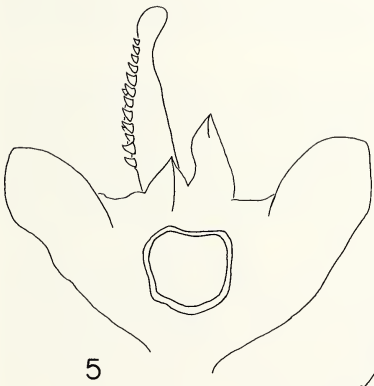
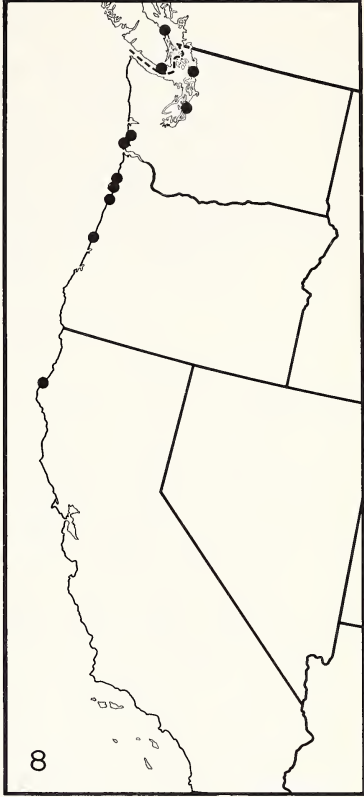
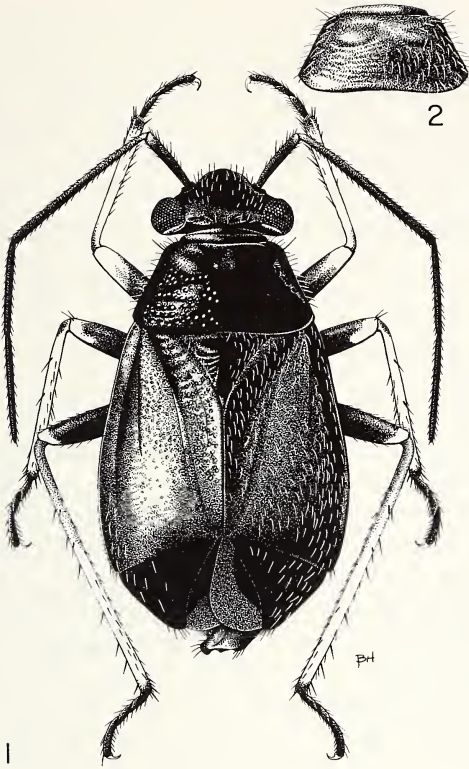
Brachypterous female. More robust than male, but very similar in color, structure and vestiture. Length 4.40–4.95, width 2.40–2.50 HEAD: width across eyes 1.35–1.36, vertex 0.66–0.68, dorsal width of eye 0.35–0.38, distance from tylus to ventral margin of eye 0.66–0.68, height of eye 0.50–0.54, maximum interocular width 0.96–0.98. ROSTRUM: length 1.88–1.93, barely reaching apices of metacoxae. ANTENNAE: I, length 0.55–0.58; II, 1.53–1.55; III, 0.85–1.00; IV, 1.03–1.15. PRONOTUM: length 0.93–0.96, anterior width 1.02–1.04, maximum width 1.65–1.70. GENITALIA: Sclerotized rings (Fig. 6): sclerotized, area within rings narrow, postero-lateral region of rings with heavily sclerotized partial rings; dorsal wall extending anterior beyond rings, with a broadly truncate mesal margin. Maximum length 0.48, maximum width 0.99. Posterior wall (Fig. 7): A—structure curving, broadly truncate on ventral margin, with slight mesal indentation. B—structure protruding posteriorly, without indentations on ventral posterior surface; median process gradually expanded dorsad. Maximum length 0.22, maximum width 0.60.

*Holotype*. Male, Washington, Pacific Co., Nahcotta Oyster Research Station, 14 June 1979, ex. *Agropyron repens*, M. D. Schwartz (CAS type no. 15024). Paratypes: 15 males, 17 females, same data as holotype (AMNH, CAS, CNC, OSU, USNM).

*Other specimens examined*. 232 specimens were examined from the fol-

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Figs. 1–8. 1. Dorsal view of body, *I. knighti*. 2. Dorsal view of pronotum, *I. sericans*. 3. Dorsal view of left paramere, *I. knighti*. 4. Dorsal view of right paramere, *I. knighti*. 5. Ventral view of vesica, *I. knighti*. 6. Posterior view of sclerotized rings and dorsal labiate plate, *I. knighti*. 7. Posterior view of inter-ramal sclerites, *I. knighti*. 8. Distribution map, *I. knighti*. Specimens illustrated are from Washington, Pacific Co. (OSU).



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lowing localities (Fig. 8): **CANADA: BRITISH COLUMBIA:** Jesse Island—(Nanaimo), 3 June 1925, 1♀ (USNM); G. J. Spencer, 1♂, 3♀♀ (UCB); 1♂ (UCB). Royal Oak, 3 June 1959, L. A. Kelton, 3♂♂, 3♀♀ (CNC). Victoria, 4 August 1912, J. B. Wallis, 1♀ (USNM); 25 June 1925, K. F. Auden, 3♀♀ (UCB); 1♀ (USNM); W. Downes, 1♂ (USNM); 15 July 1923, K. F. Auden, 1♀ (UCB); 3 June 1933, O. H. Swezey, 2♀♀ (CAS); 15 May 1928, W. Downes, 1♂, 1♀ (USNM). **UNITED STATES: CALIFORNIA:** *Humboldt Co.*, 5 mi. W Loleta—tidal mud flat, 9 June 1963, Ball, Freitag, Lister, McDonald, 1♀ (UALB). **OREGON:** *Lane Co.*, 12 mi. N Florence—Big Creek Rd.—Siuslaw Nat. For., 30 May 1979, ex. *Holcus lanatus*, M. D. Schwartz, 1♂, 2♀♀ (OSU). *Tillamook Co.*, 2.3 mi. N Neskowin on rt. 101, 21 May 1979, ex. *Festuca rubra*, *Holcus lanatus*, *Poa pratensis*, M. D. Schwartz, 27♂♂, 8♀♀ (OSU); 0.1 mi. N Rockway on rt. 101, 1 June 1979, M. D. Schwartz, 1♂ (OSU); Sand Beach Cmpgrd.—2 mi. W Sand Lake, 13 June 1972, ex. *Poa* sp. & *Carex* sp., J. D. Lattin, 9♂♂, 21♀♀ (OSU); Sand Lake, 7 July 1962, G. C. Eickwort, 3♂♂, 2♀♀ (MSU); Tierra del Mar, 13 June 1972, J. D. Lattin, 1♂ (OSU). **WASHINGTON:** *King Co.*, Seattle, 20 May 1916, 14♂♂, 8♀♀ (OSU); 24 May 1928, 1♂ (OSU); 25 May 1928, 1♂ (OSU). *Pacific Co.*, Bay Center, 30 June 1931, 1♀ (OSU); Nahcotta, 14 June 1979, ex. sweeping grasses just above tide line on bay shore, R. T. Schuh, 14♂♂, 6♀♀ (AMNH); G. M. Stonedahl, 1♂ (OSU); Wallapa Bay—near Nahcotta, 12 June 1971, W. J. Turner, M. Wiebers, J. A. Novak, D. N. Feno, 29♂♂, 25♀♀ (WSU). *Skagit Co.*, Mt. Vernon, 25 May 1961, M. C. Lane, 1♂ (OSU).

*Etymology.* Named in honor of the late Dr. Harry Hazelton Knight of Iowa State University, the renowned worker of the North American Miridae. The junior author, during his undergraduate years at Iowa State, had the good fortune to work with Dr. Knight who kindled the former's interest in the Hemiptera.

*Discussion.* The genus *Irbisia* contains 23 species; all are Nearctic (Schwartz, 1981). The junior author found this species with specimens borrowed from WSU. In addition, the senior author upon examining the Knight collection, at the United States National Museum at Washington, D.C. found five specimens of *Irbisia* with Dr. Knight's characteristic red labels indicating a "new species." These specimens are of *I. knighti*.

This species is narrowly distributed along the coastal flatlands of the Pacific Northwest. It occupies a very restricted portion of the Vancouverian Zone as defined by Van Dyke (1939). Adult specimens were collected from these hosts: *Agropyron repens* (L.) Beauv., *Carex* sp. (a sedge), *Festuca rubra* L., *Holcus lanatus* L., *Poa pratensis* L., and *Poa* sp. None of these grasses (*Carex* sp. is a doubtful host) are obligatorily associated with the apparent restricted habitat of *I. knighti*. Collection dates are from 15 May to 15 July. All localities are from sea level to 45 meters (150 feet) elevation.

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